

## GreenLoxx<sup>®</sup> for Banks & Slopes

**Sustainable, Strong and Green.** Our customized designs, industry expertise and scientifically-tested GrowingMedia<sup>™</sup> are all a part of our commitment to your success.



### GreenLoxx LivingWall Advantages

- Stabilize and prevent erosion of riparian waterways, shoreline banks and steep slopes
- No soil disturbance—ideal for environmentally sensitive areas
- Immediate protection from toe cutting and sloughing
- Establish and reinforce vegetation under intense hydraulic pressure
- No rain? Integrated irrigation system keeps walls looking great
- LivingWalls can contribute to the LEED points of a project in several categories

### Filtrex Environmental Sustainability Benefits

Filtrex GroSoxx<sup>®</sup> uses **locally recycled organic materials** inside of photodegradable or biodegradable mesh. Diverting these organic materials from landfills and applying them to the soil means a reduction in greenhouse gas emissions. **For every 1,000' of 12" GroSoxx used, 160,000 lbs of organic materials are diverted and your carbon footprint is reduced by 307,000 lbs CO<sub>2</sub>e.** This is the equivalent of offsetting the greenhouse gas emissions of **29 passenger vehicles** driven for one year. In addition, the potential water absorption equals up to **4,000 gallons, per rainfall event.**<sup>1</sup>



# GreenLoxx® Non-MSE LivingWall



GreenLoxx Non-MSE allows for the stabilization of eroded or damaged slopes, riparian waterways, and shoreline banks while creating attractive, vegetated landscapes without the use of hard materials such as concrete. FLW Geogrid is wrapped over the GroSoxx and secured with soil anchors.

MSE	Materials	Slope
No	GroSoxx® FLW Geogrid Soil anchors	up to 50°



- Lightweight components
- Minimal base preparation required
- Minimal excavation; no backfill required
- Immediate protection from toe cutting & sloughing
- Establish and reinforce vegetation under intense hydraulic pressure
- Drains freely, less hydrostatic pressure
- Flexible design options available





# GreenLoxx® MSE LivingWall



GreenLoxx MSE permanently stabilizes eroded or damaged slopes by using vegetated GroSoxx instead of concrete blocks—the walls are mechanically stabilized by wrapping FLW Geogrid around GroSoxx and into the embankment.

MSE	Materials	Slope
✓	GroSoxx® FLW Geogrid	up to 80°



- Withstands high flow velocities—ideal for sensitive riparian areas
- Safer & more flexible installation than block walls
- Install individual (palletized) GroSoxx or continuous lengths
- FLW Geogrid reinforcement
- Wall slope & height determined by site conditions and engineering

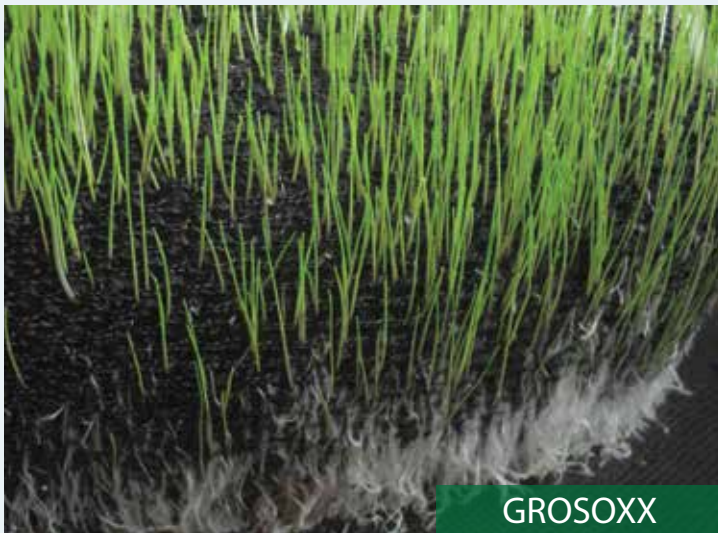




## GroSoxx® Technology



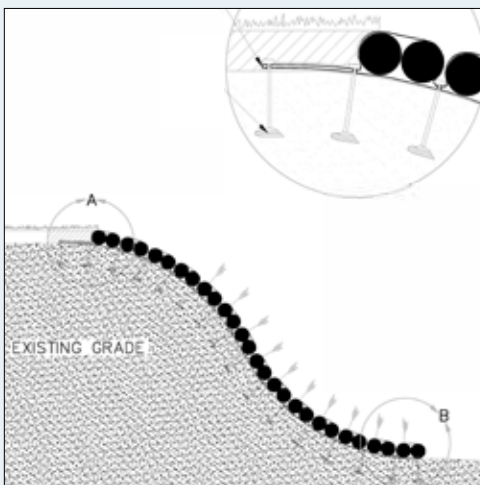
GroSoxx is the basis of the GreenLoxx LivingWall system for quickly establishing vegetation on shorelines, banks, walls, and slopes. GroSoxx uses heavy duty Filtrex tubular netting, filled with certified, composted GrowingMedia™ to provide a stable and fertile environment for plant growth. The use of GroSoxx for wall infill speeds construction, eliminates waste, prevents weeds from taking root, and offers a safer installation process. Available pre-seeded throughout, or plant after construction is complete. GroSoxx provides the highest amount of facial growing material in each application, maximizing environmental benefits.



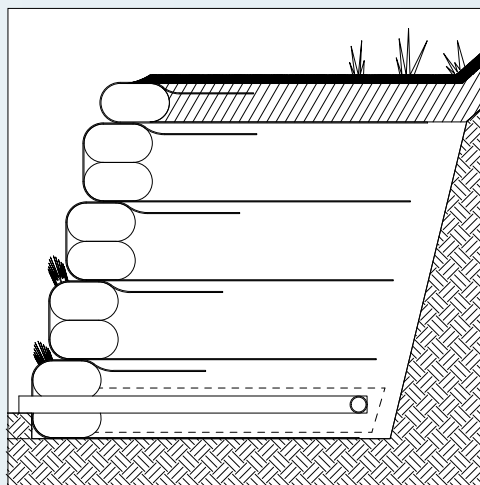
### Vegetation Options

- Grasses, including natives
- Vines and groundcover
- Wildflowers
- Perennials and annuals
- Woody vegetation from live stakes or pots (2" diameter or less so that grids are not cut in planting)

## Specifications & CADs



GreenLoxx Non-MSE CAD



GreenLoxx MSE CAD

Visit our library of specifications and CADs for all LivingWall applications and designs at [www.filtrex.com/specifications](http://www.filtrex.com/specifications)

## FLW Geogrid



FLW Geogrid is bidirectional and secured with soil anchors. The standard 2"x2" opening eliminates cutting the grid for planting. Multiple geogrid strengths are available.



# Project Profile: Streambank Stabilization

## Columbia, SC

A Richland County stream had heavily eroded banks, and residents had begun voicing concerns to the County about the loss of land. Richland County took on the project in order to restore the lost real estate. The engineer originally proposed using turf reinforcement mats, but that would have meant taking away even more land to create the necessary slope angle. "The County was looking for a design that would allow for the streambanks to be built back up quickly, almost vertically in some locations, and a design that would also look very natural," said Allison Steele, Stormwater Engineer for Richland County. "The whole point of the project was to give them their yards back." Engineering firm CDM Smith decided to use the Filtrexx GreenLoxx LivingWall system, not only for its verticality, but also for its ease of installation in a forested environment. The GroSoxx used in the GreenLoxx LivingWall mold to fit around trees, eliminating the need to clear cut. Filtrexx® Certified<sup>SM</sup> Installers Eco-FX, Inc. (Charlotte, NC) and Coogler Construction, Inc. (Ballentine, SC) teamed up for the custom installation. Together they installed approximately 600 feet of streambank, and the work was completed in about two weeks. GreenLoxx can be installed with or without mechanical reinforcement—this project used both. The GroSoxx were pre-seeded with an annual cover crop. The team returned in spring to plant several hundred native plants for permanent stabilization.





# Our LivingWalls are designed for environmental benefits.

Compost-based LivingWalls can have a significant impact on your project's sustainability.



## LivingWall Benefits<sup>1</sup>

- Reduction of the Urban Heat Island Effect
- Improved Exterior Air Quality
- Noise Reduction
- Increased Green Space, Biodiversity and Habitat
- Forage for Native Pollinators
- Urban Agriculture
- Onsite Wastewater Treatment
- Improved Health and Well-Being
- Aesthetic Improvements
- Local Job Creation



## Carbon Footprint Reduction<sup>2</sup>

There are three key ways in which compost-based LivingWalls can significantly lower a site's carbon footprint:

- Methane avoidance resulting from diverting organics from landfills
- Carbon sequestration by permanent vegetation
- Carbon sequestration by storing carbon in the soil

This GreenLoxx MSE LivingWall on the Chattahoochee River has the following impact:

- 656,000 lbs of Organics Diverted from Landfills
- 1,148,000 lbs of CO<sub>2</sub>e Methane Avoidance
- 205 lbs of CO<sub>2</sub> Sequestered in Vegetation
- 110,700 lbs of CO<sub>2</sub> Sequestered in Soil

This is the equivalent of offsetting the greenhouse gas emissions of 121 passenger vehicles driven for one year.<sup>1</sup>



© Don Bishop Photography

## Treating Stormwater Runoff<sup>2</sup>

With approximately 50% organic matter, a high porosity, and high relative surface area, compost has the ability to absorb significant volumes of water.

This GreenLoxx MSE LivingWall, stabilizing a bluff on Lake Michigan, not only provides habitat and beauty, it can also absorb significant amounts of stormwater.

Each linear ft of 12-in GroSoxx (1 square foot of LivingWall) can absorb up to 4 gallons of water. Utilizing 2,000 ft of 12-in GroSoxx, this wall has the potential to absorb up to 8,000 gallons of rainfall per event.<sup>2</sup>

In other applications, replacing a traditional concrete block wall with a permeable LivingWall on a site with a stormwater retention basin or bioretention system, may allow engineering and construction of a smaller stormwater retention basin or bioretention system, and/or increased absorption of area rainfall, and may also contribute to LEED Green Building Credits.

Sources: <sup>1</sup>Green Roofs for Healthy Cities, "About Green Walls". <sup>2</sup>Filtrexx TechLink Research Summary #3335.

SiltSoxx™ are in compliance with most state & federal agencies including:

